

IN THE CLAIMS

1-29. (currently cancelled)


30-39. (previously cancelled)

40-43. (currently cancelled)

44-45. (previously cancelled)

46-52. (currently cancelled)

53. (New) A process for the preparation of a plurality of well-defined structures, said process comprises the following steps, not necessarily in the order as listed:

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- (a) providing a support web;
 - (b) coating a layer of a radiation curable material on said support web;
 - (c) providing a photomask as a continuous loop which comprises a pattern corresponding in form to at least one of said well-defined structures;
 - (d) aligning said photomask loop with said support web so that at least a portion of said photomask loop is in generally parallel orientation to at least a portion of said support web;
 - (e) selectively exposing at least a portion of said radiation curable material to radiation through said photomask, leaving at least a portion of said radiation curable material unexposed;
 - (f) moving said photomask loop and said support web in a synchronized motion so that at least a portion of said photomask loop and at least a portion of said support web are moving in parallel in substantially the same direction; and
 - (g) removing said unexposed radiation curable material to form a plurality of said well-defined structures.

54. (New) The process of Claim 53 wherein said photomask loop and said support web are moving at substantially the same speed.

55. (New) A process for the preparation of a plurality of microcups, which process comprises, not necessarily in the order listed:

- (a) providing a support web which comprises a plurality of conductor lines for addressing said microcups;
- (b) coating a layer of a radiation curable material on said support web;

- (c) providing a photomask as a continuous loop which comprises a pattern corresponding in form to at least one of said microcups;
- (d) selectively exposing at least a portion of said radiation curable material to radiation through said photomask loop, leaving at least a portion of said radiation curable material unexposed; and
- (e) removing said unexposed radiation curable material so as to form said microcups.

56. (New) The process of Claim 55 further comprising filling said microcups with an electrophoretic display pigment/solvent composition or liquid crystal display composition and sealing said filled microcups.

57. (New) The process of Claim 56 wherein said step of filling comprises filling substantially all of said microcups with a single electrophoretic display pigment/solvent composition or liquid crystal display composition to form a monochrome display.

58. (New) The process of Claim 56 wherein said step of filling comprises filling said microcups with different electrophoretic display pigment/solvent compositions or liquid crystal display compositions to form a multi-color display.

59. (New) A process for the preparation of a plurality of well-defined structures, said process comprises the following steps, not necessarily in the order as listed:

- (a) providing a support web which comprises a plurality of elements;
- (b) coating a layer of a radiation curable material on said support web;
- (c) providing a photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity;
- (d) aligning at least a portion of said photomask loop and at least a portion of said support web in a manner that said areas of opacity correspond to said elements on said support web;
- (e) selectively exposing at least a portion of said radiation curable material through said areas of transparency of said photomask loop, leaving at least a portion of said radiation curable material unexposed;
- (f) moving said photomask loop and said support web in a synchronized motion so as to maintain a predetermined spatial relationship between at least a portion of said photomask loop and at least a portion of said support web

wherein said synchronized motion comprises moving at least a portion of said photomask loop and at least a portion of said support web in parallel in substantially the same direction; and

- (g) removing said unexposed radiation curable material to form a plurality of said well-defined structures.

60. (New) The process of Claim 59 wherein said photomask loop and said support web are moving at substantially the same speed.

61. (New) The process of Claim 60 wherein said photomask loop and said support web are moving at a constant speed.

62. (New) The process of Claim 59 wherein steps (e) and (f) are carried out simultaneously.

63. (New) The process of Claim 59 wherein step (b) is carried out continuously.

64. (New) The process of Claim 59 wherein step (e) is carried out continuously.

65. (New) The process of Claim 59 wherein step (f) is carried out continuously.

66. (New) The process of Claim 59 further comprising the following steps:

- (i) detecting one of said elements or a pre-formed marker on said support web;
- (ii) detecting one of said areas of opacity or a pre-formed marker on said photomask loop; and
- (iii) controlling the motion of said support web and said photomask loop in response to steps (i) and (ii) so as to bring at least a portion of said support web into said predetermined spatial relationship with at least a portion of said photomask loop.

67. (New) A process for the preparation of microcups which process comprises, not necessarily in the order listed:

- (a) providing a support web which comprises a plurality of conductor lines for addressing said microcups;
- (b) coating a layer of a radiation curable material on said support web;
- (c) providing a photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity and said areas of transparency correspond in form to wall structure of said microcups;

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- (d) aligning at least a portion of said photomask loop and at least a portion of said support web in a manner that said areas of opacity correspond to said conductor lines on said support web;
- (e) selectively exposing at least a portion of said radiation curable material through said areas of transparency of said photomask loop, leaving at least a portion of said radiation curable material corresponding to areas of opacity of said photomask loop unexposed; and
- (f) moving said photomask loop and said support web in a synchronized motion so as to maintain a predetermined spatial relationship between at least a portion of said photomask loop and at least a portion of said support web.

68. (New) The process of Claim 67 further comprising removing said unexposed radiation curable material to form said microcups.

69. (New) The process of Claim 68 which step of removing said unexposed radiation curable material is carried out continuously.

70. (New) The process of Claim 55 wherein said conductor lines are transparent to visible light.

71. (New) The process of Claim 67 wherein said conductor lines are transparent to visible light.

72. (New) A process for the preparation of a multi-color display, which process comprises:

- (a) providing a support web which comprises a plurality of pre-formed microcups with top openings;
- (b) laminating a layer of a radiation curable material over said top openings of said microcups;
- (c) providing a photomask as a continuous loop which comprises a pattern corresponding in form to said top openings of a first pre-selected subset of microcups;
- (d) selectively exposing said radiation curable material to radiation through said photomask loop; and
- (e) removing said exposed radiation curable material so as to re-open said first pre-selected subset of microcups.

73. (New) The process of Claim 72 wherein said radiation curable material is a positively working photoresist.

74. (New) The process of Claim 72 further comprising the steps of filling said re-opened first pre-selected subset of microcups with a first electrophoretic display pigment/solvent composition or liquid crystal display composition and sealing said filled first pre-selected subset of microcups.

75. (New) The process of Claim 74 further comprising the following steps:

- (i) providing a photomask as a continuous loop which comprises a pattern corresponding in form to said top openings of a second pre-selected subset of microcups;
- (ii) selectively exposing said radiation curable material to radiation through said photomask loop; and
- (iii) removing said exposed radiation curable material so as to re-open said second pre-selected subset of microcups.

76. (New) The process of Claim 75 further comprising the steps of filling said re-opened second pre-selected subset of microcups with a second electrophoretic display pigment/solvent composition or liquid crystal display composition and sealing said filled second pre-selected subset of microcups.

77. (New) The process of Claim 76 further comprising the following steps:

- (i) providing a photomask as a continuous loop which comprises a pattern corresponding in form to said top openings of a third pre-selected subset of microcups;
- (ii) selectively exposing said radiation curable material to radiation through said photomask loop; and
- (iii) removing said exposed radiation curable material so as to re-open said third pre-selected subset of microcups.

78. (New) The process of Claim 77 further comprising the steps of filling said re-opened third pre-selected subset of microcups with a third electrophoretic display pigment/solvent composition or liquid crystal display composition and sealing the filled third pre-selected subset of microcups.

79. (New) The process of Claim 78 further comprising laminating said sealed first, second and third subsets of microcups with a top laminate.

80. (New) A process for the preparation of a multi-color display, which process comprises:

- (a) providing a support web which comprises a plurality of pre-formed microcups with top openings;
- (b) laminating a layer of a positively working photoresist over said top openings of said microcups;
- (c) providing a photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity and said areas of transparency correspond in form to said top openings of a first pre-selected subset of microcups;
- (d) selectively exposing said positively working photoresist to radiation through said areas of transparency of said photomask loop; and
- (e) removing said exposed positively working photoresist so as to re-open said first pre-selected subset of microcups.

81. (New) The process of Claim 80 further comprising the steps of filling said re-opened first pre-selected subset of microcups with a first electrophoretic display pigment/solvent composition or liquid crystal display composition and sealing said filled first pre-selected subset of microcups.

82. (New) The process of Claim 81 further comprising the following steps:

- (i) providing a photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity and said areas of transparency correspond in form to said top openings of a second pre-selected subset of microcups;
- (ii) selectively exposing said positively working photoresist to radiation through said areas of transparency of said photomask loop; and
- (iii) removing said exposed positively working photoresist so as to re-open said second pre-selected subset of microcups.

83. (New) The process of Claim 82 further comprising the steps of filling said re-opened second pre-selected subset of microcups with a second electrophoretic display

pigment/solvent composition or liquid crystal display composition and sealing said filled second pre-selected subset of microcups.

84. (New) The process of Claim 83 further comprising the following steps:

- (i) providing a photomask as a continuous loop which comprises a pattern having areas of transparency and areas of opacity and said areas of transparency correspond in form to said top openings of a third pre-selected subset of microcups;
- (ii) selectively exposing said positively working photoresist to radiation through said areas of transparency of said photomask loop; and
- (iii) removing said exposed positively working photoresist so as to re-open said third pre-selected subset of microcups.

85. (New) The process of Claim 84 further comprising the steps of filling said re-opened third pre-selected subset of microcups with a third electrophoretic display pigment/solvent composition or liquid crystal display composition and sealing said filled third pre-selected subset of microcups.

86. (New) The process of Claim 85 further comprising laminating over said sealed first, second and third subsets of microcups with a top laminate for addressing said microcups.

87. (New) The process of Claim 86 wherein said top laminate is coated with an adhesive.

88. (New) A photolithographic process comprising imagewise exposure through a moving photomask synchronized with a moving web substrate wherein said web substrate comprises indium-tin oxide (ITO) on PET (polyethylene terephthalate), PEN (polyethylene naphthalate) or polycarbonate and said ITO is coated with a radiation curable material.

89. (New) The process of Claim 88 wherein said radiation curable material is a positively working photoresist.

90. (New) The process of Claim 89 wherein said web substrate is ITO/PET coated with a positively working photoresist.

91. (New) The process of Claim 90 wherein the positively working photoresist is developed after exposure and the ITO/PET is etched to expose discrete patterns.

92. (New) The process of Claim 91 wherein said positively working photoresist is stripped.

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